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RPPR Final Report
as of 26-Aug-2022

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Proposal Number: 80619INCF **Agreement Number: W911NF-22-1-0125**
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Begin Performance Period: 19-Jul-2022 **End Performance Period:** 18-Sep-2022
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Submitted By: Katarzyna Wejsis-Karczmarczyk Email: kasia@nobell.pl
Phone: (482) 262-16737
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STEM Degrees: **STEM Participants:**

Major Goals: Recurring Joint European Magnetic Symposia JEMS are the most important and comprehensive conference on magnetism in Europe. Since first meeting in 2001 in Grenoble, France, JEMS conferences were held 11 times (France'01, Germany'04,) Spain'06, Ireland'08, Poland'10, Italy'12, Greece'13, UK'16, Germany'18, Sweden'19, Portugal'20-online) with JEMS2022 in Warsaw being its 12th edition. The conference is a widely recognized meeting and thus brings together outstanding world experts in the field of magnetism and enables efficient exchange of experience. During the conference key accomplishments and concepts in physics of magnetism are presented and discussed. These includes among others breakthroughs in the fields of advanced magnetic material synthesis, modeling and their experimental application, quantum information processing, interfacing topological materials with magnetism, spintronics and many others.
The high scientific level of the conference is ensured thanks to the effort of world-class experts from the Program Committee and the International Advisory Committee (http://magnetism.eu/42-advisory-committee.htm) consisting of many experts from leading scientific centers in Poland, Europe, USA and Japan.
Due to the dire consequences of the military aggression of the Russian Federation supported by the Republic of Belarus against Ukraine, the organizers of JEMS2022 , supported by EMA organization, decided that scientists affiliated with Russian or Belarusian scientific institutions cannot participate in the conference and present their works.

Accomplishments: Detailed conference programme is given under the Upload section.

Training Opportunities: Nothing to Report

Results Dissemination: Nothing to Report

Honors and Awards: Nothing to Report

Protocol Activity Status:

Technology Transfer: Nothing to Report

PARTICIPANTS:

Participant Type: Postdoctoral (scholar, fellow or other postdoctoral position)

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Participant: Andrzej Wisniewski
Person Months Worked: 15.00 **Funding Support:**
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Participant: Katarzyna Gas
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Authors: Multiple
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Partners

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I certify that the information in the report is complete and accurate:
Signature: Katarzyna Wejsis-Karczmarczy
Signature Date: 8/16/22 7:23AM

MICKIEWICZ AUDITORIUM / ZOOM 1 | Monday, 25 July 2022

Session	Chaired by	Start	End	Title	Speaker
Special session		08:00	08:15	Opening Session	
Plenary	Tomasz Dietl	08:15	09:05	Making Sense of the Quantum Anomalous Hall Effect (virtual)	Laurens Molenkamp
Semi-Plenary	Roman Puźniak	09:15	09:55	Artificially-constructed chains of magnetic adatoms on superconducting 2H-NbSe2	Katharina Franke

Session	Chaired by	Start	End	Title	Speaker
S11.1	Michal Krupinski	**10:15**	**10:45**	**Semiconductor systems for optical studies of single magnetic ions**	**Piotr Kossacki (invited)**
		10:45	11:00	Ferromagnetic coupling in doped HgTe: a route for the quantum anomalous Hall effect (virtual)	Giuseppe Cuono
		11:00	11:15	Spin-glass state and Almeida-Thouless line observation in Ge1-x-y(SnxMny)Te multiferroics	Abdul Khaliq
		11:15	11:30	Electronic structure of ferromagnetic Sn1-xMnxTe thin films	Monika Zięba
		11:30	11:45	Ferromagnetism and band structure engineering in the (Ga,Mn)As, Ga(Bi,As) and (Ga,Mn) (Bi,As) nanolayers	Oksana Yastrubchak
		11:45	12:00	Spin-structured multilayer THz emitters	Elias Kueny
		12:00	12:15	Structural phase transition in Fe thin films: DFT study	Mirosław Werwiński

Session	Chaired by	Start	End	Title	Speaker
S11.2	Piotr Kossacki	**13:15**	**13:45**	**Voltage-driven ON-OFF switching of ferromagnetism in transition metal oxide and nitride films for neuromorphic applications**	**Jordi Sort (invited)**
		13:45	14:00	Voltage-controlled switching of magnetic anisotropy in ambipolar Mn2CoAl/Pd bilayers (virtual)	Yao Zhang
		14:00	14:15	Energy-efficient magnetoelectrochemical effect of La0.7Sr0.3MnO3-δ via voltage-driven oxygen motion	Zhibo Zhao
		14:15	14:30	Towards electric control of magnetism: moving magnetic domains in magnetite / Ru(0001) nanostructures	Juan De la Figuera
		14:30	14:45	Origin of dual magnetoresistance behavior in the nanopatterned titanium/titanium oxide/iron systems	Juliusz Chojenka
		14:45	15:00	Beating the limitation of the Néel temperature of FeO with antiferromagnetic proximity in FeO/CoO	Marcin Szpytma
		15:00	15:15	Atomic scale structure rearrangements in Y3Fe5O12 epitaxial films on GGG(111) substrates explored by HR-STEM (virtual)	Jose Santiso

Session	Chaired by	Start	End	Title	Speaker
S4.1	Olena Gomonay	**15:45**	**16:15**	**Antiferromagnetic magnon pseudospin and Hanle effect**	**Akashdeep Kamra (invited)**
		16:15	16:30	Long-distance magnon spin transport in antiferromagnetic insulators	Edgar Felipe Galindez-Ruales
		16:30	16:45	Towards antiferromagnetic dynamic solitons: terahertz Slonczewskii spin waves in antiferromagnetic spin-Hall nano-oscillators	Mohammad Hamdi
		16:45	17:00	Magnetic properties of biphasic LaCr3(BO3)4 crystal	Yuliya Savina
		17:00	17:15	Antiferromagnetic domain wall as a reconfigurable long Josephson junction	Roman Khymyn
		17:15	17:30	Unveiling Oxidation and Spin State of Fe in Li1-xZnxFeO2	Priyanka Nehla
		17:30	17:45	Single crystal studies of NaMnAs, a rediscovered room temperature antiferromagnetic semiconductor	Jiří Volný

Session	Chaired by	Start	End	Title Speaker
Posters	Marta Borysiewicz	18:15	19:15	Monday.P1 (virtual) 1. *Konrad Puzniak* / Spin-1/2 antiferromagnetic XXZ chain BaCo2V2O8 in a transverse external magnetic field - dispersion of E8 particles 2. *Irina Dolgikh* / Ultrafast Emergence of Ferromagnetism in Antiferromagnetic FeRh in High Magnetic Fields 3. *Oleksii Zadorozhnii* / In-situ electrically and thermally controlled magnetic imaging of metamagnetic FeRh in transmission electron microscope 4. *Rekha Agarwal* / Substrate dependence of THz emission from epitaxial-NiO/Pt heterostructures 5. *Nimisha Arora* / Spin wave dynamics as a metrological archetype for topologically protected spin structures (TSS) 6. *Thanh Binh Nguyen* / HAMR Switching Efficiency in Coreshell L10/A1-FePt Grain 7. *Joshua M. Salazar-Mejía* / Offset free magnetic sensing principle and the role of the spin-orbit torque coefficients 8. *Myriam Pannetier-Lecoeur* / Magnetic noise reduction strategies in magnetoresistive sensors for improved detection limits

OLD LIBRARY / ZOOM 2 | Monday, 25 July 2022

Session	Chaired by	Start	End	Title	Speaker
Semi-plenary	Wolfgang Kuch	09:15	09:55	Femtomagnetism meets Spintronics	Bert Koopmans

Session	Chaired by	Start	End	Title	Speaker
S14.1	Maciej Krawczyk	**10:15**	**10:45**	**Suppression of the spin waves non-reciprocity due to interfacial Dzyaloshinskii–Moriya interaction by lateral confinement in magnetic nanostructures (virtual)**	**Giovanni Carlotti (invited)**
		10:45	11:00	Magnon-magnon entanglement's detection and the phonon effects in antiferromagnetic structure	Yuefei Liu
		11:00	11:15	Nonlinear interactions between spin-wave modes probed by parametric excitation in YIG microstructures (virtual)	Titiksha Srivastava
		11:15	11:30	Using Propagating Spin Wave Spectroscopy to Probe Interfacial Phenomena Modified by an Electric Field	Adrien Petrillo
		11:30	11:45	No standing spin waves found in a rectangular permalloy microstrip under uniform magnetic excitation	Santa Pile
		11:45	12:00	Nonreciprocal propagation of surface acoustic waves in a CoFeB/Ru/CoFeB trilayer synthetic antiferromagenet (virtual)	Hiroki Matsumoto
		12:00	12:15	Current driven spin-wave emissions from magnetic vortex cores	Sabri Koraltan

Session	Chaired by	Start	End	Title	Speaker
S14.2	Santa Pile	**13:15**	**13:45**	**Direct imaging of spin-wave dynamics in a low-damping ferrimagnet close to antiferromagnetic compensation**	**Sebastian Wintz (invited)**
		13:45	14:00	Paramagnetic resonance in GGG at ultralow temperatures	Rotyslav Serha
		14:00	14:15	Non-reciprocal magnons in non-centrosymmetric MnSi (virtual)	Robert Georgii
		14:15	14:30	The impact of perpendicular anisotropy, Dzyaloshinskii–Moriya interaction and damping on spin wave dispersion and mode softening in thin magnetic films.	Nikodem Leśniewski
		14:30	14:45	Does the orbital angular momentum of light influence ultrafast demagnetization? (virtual)	Eva Prinz
		14:45	15:00	Ultrafast element- and depth-resolved magnetization dynamics probed by transverse magneto-optical Kerr effect spectroscopy in the soft x-ray range	Martin Hennecke

Session	Chaired by	Start	End	Title	Speaker
S9.1	Adam Papp	**15:45**	**16:15**	**Voltage-control of effective damping in spin Hall nano-oscillators**	**Victor H. González (invited)**
		16:15	16:30	Micromagnetic Simulations of Spin-Orbit Torque Driven Domain Wall Based Memristor Devices	Elena Stetco
		16:30	16:45	Absence of Walker breakdown in the dynamics of chiral N\'eel domain walls driven by in-plane strain gradients	Mouad Fattouhi
		16:45	17:00	Asymmetrically Interfaced Double Barrier Magnetic Tunnel Junctions for MRAM Devices	Maxwel Gama Monteiro
		17:00	17:15	Comparative study of magnetic properties of Mn3+ magnetic clusters in GaN using classical and quantum mechanical approach	Yadhu Krishnan Edathumkandy
		17:15	17:30	Optimal protocol for switching of a perpendicular nanomagnet by means of magnetic field and spin-orbit torque.	Grzegorz Kwiatkowski
		17:30	17:45	Numerical model of harmonic Hall voltage detection for spin orbit torque devices	Sławomir Ziętek

Session	Chaired by	Start	End	Title Speaker
Posters	Mateusz Goryca	18:15	19:15	Monday.P2 (virtual) 1. *Jon Ander Arregi* / Optical microscopy of antiferromagnetic and ferromagnetic domains in FeRh thin films 2. *Mohamed Ben Chroud* / Magnetron sputtered epitaxial NiAl seed layer on Ge for enhanced VCMA effect. 3. *Oleksandr Chumak* / Correlation of magnetoelastic interactions and magnetic damping in thin Co2Fe0.4Mn0.6Si and Co2FeGa0.5Ge0.5 magnetic layers 4. *Umit Daglum* / Magnetic properties of Mn3Ga, calculated from first principles and mappend onto an effective spin Hamiltonian for atomistic spin dynamics simulations 5. *Javier Díaz* / Analysis of the dysprosium M5 circularly polarized X ray absorption spectrum to detect magnetically uncoupled rare earth atoms to TM in TM-RE amorphous alloys 6. *Mattia Benini* / Colossal enhancement of the coercivity in thin Co films interfaced with molecules 7. *Elizabeth Davis-Fowell* / Investigation and optimisation of magnetic properties of Ga-doped τ MnAl 8. *Kateryna Sova* / Ferromagnetic resonance in Fe3O4 nanoparticles in combination with ligands

AULA A / ZOOM A | Monday, 25 July 2022

Session	Chaired by	Start	End	Title	Speaker
S8.1	Ester M. Palmero	**10:15**	**10:45**	**Magnetocaloric materials and multifunctional properties (virtual)**	**Fengxia Hu (invited)**
		10:45	11:00	Evolution of magnetic properties of Mn-Fe-P-Si-B alloy: from bulk to microwire	Andrea Dzubinska
		11:00	11:15	High magnetic anisotropy and rotating magnetocaloric effect in Tb3Ni single crystal	Aritz Herrero Hernandez
		11:15	**11:45**	**Fully solid state magnetocaloric cooling: an efficient alternative solution for refrigeration (virtual)**	**Daniel José Da Silva (invited)**
		11:45	12:00	Rotating magnetocaloric effect in 2D molecular magnets	Piotr Konieczny

Session	Chaired by	Start	End	Title	Speaker
S13.1	Piotr Mazalski	**13:15**	**13:45**	**Antiskyrmions, skyrmions, and mixed-topology skyrmions in crystals with S4 symmetry**	**Jan Masell (invited)**
		13:45	14:00	A micromagnetic theory of skyrmion lifetime in ultrathin ferromagnetic films (virtual)	Anne Bernand-Mantel
		14:00	14:15	Stochastic dynamics of skyrmion bubble by alternating magnetic fields (virtual)	Minori Goto
		14:15	14:30	Controlled Localization of Magnetic Skyrmion Nucleation	Lisa-Marie Kern
		14:30	14:45	Statistical analysis of superdiffusion of skyrmion bubbles	Malte Römer-Stumm
		14:45	**15:15**	**Ferrimagnetic skyrmions in GdCo**	**João Sampaio (invited)**

Session	Chaired by	Start	End	Title	Speaker
S13.2	Jan Masell	**15:45**	**16:15**	**Spin-orbit enabled all-electrical read-out of chiral spin-textures and impact of defects (virtual)**	**Samir Lounis (invited)**
		16:15	16:30	Get skyrmions back on track: suppressing skyrmion Hall angle by material engineering or gate voltage	Charles-Élie Fillion
		16:30	16:45	Magneto-ionic and electrostatic generation of non-volatile and volatile skyrmions in MgO/Mn2CoAl/Pd thin films using ionic liquid gating	Simon Granville
		16:45	17:00	Gate-Controlled Skyrmions in Magnetic Trilayer Tracks	Johanna Fischer
		17:00	17:15	Image-recognition-assisted characterization of metastable topological structures in chiral magnetic thin films	Cameron Rudderham
		17:15	17:30	Creation of single chiral soliton states in monoaxial helimagnets (virtual)	Santiago Osorio
		17:30	17:45	Emergence of zero-field non-synthetic single and catenated antiferromagnetic skyrmions in thin films (virtual)	Amal Aldarawsheh

Session	Chaired by	Start	End	Title Speaker
Posters	Katarzyna Gas	18:15	19:15	Monday.P3 (virtual) 1. *Nico Dix* / Low temperature magnetic transition and spin-lattice coupling in ε-Fe2O3 epitaxial thin films 2. *Borislava Georgieva* / Effect of half substitution with nickel for magnesium on the magnetic properties of Y-type Ba0.5Sr1.5NiMgFe12O22 hexaferrite synthesized by citric acid sol-gel auto-combustion 3. *Nihad AbuAwwad* / Magnetism in two-dimensional CrTe2 4. *Pankhuri Gupta* / Ferromagnetic resonance study of 2D-SnS/Ni80Fe20 heterostructures 5. *Alejandro Rivelles* / FORC analysis in arrays of interacting nanodots 6. Wanissa Benmessaoud / Local mapping of the magnetic response of materials. 7. *Tim A. Butcher* / Microspectroscopy of Magnetic Nanostructures with Soft X-Ray Ptychography 8. *Wojciech Plucinski* / Advanced modeling of the Torque Motor magnetic circuit

AULA B / ZOOM B | Monday, 25 July 2022

Session	Chaired by	Start	End	Title	Speaker
S3.1	Roman Puźniak	**10:15**	**10:45**	**Spin arrangements in the double perovskite LaSr1-xCaxNiReO6**	**Konstantinos Papadopoulos (invited)**
		10:45	11:00	Magnetic anisotropy in CoFe2O4 based nanocomposite (virtual)	Sawssen Slimani
		11:00	11:15	Properties of systematically disordered Cr2AlC thin films	Joao Salgado Cabaco
		11:15	11:30	Role of Geometric Frustration in a Weakly Disordered Checkerboard Lattice (virtual)	Sergio Magalhaes
		11:30	11:45	Frustrated spin- 1 2 J1–J2–J⊥1 Heisenberg magnet on a honeycomb bilayer: High-order coupled cluster study of its phase diagram	Raymond Bishop
		11:45	12:00	Pulse High-Field Magnetization of frustrated FCC magnet RInCu4 (virtual)	Takeshi Waki

Session	Chaired by	Start	End	Title	Speaker
S15.1	Sandra Ruiz Gomez	**13:15**	**13:45**	**Nonlinear magnetotransport in topological insulators and other 2D materials (virtual)**	**Anna Dyrdał (invited)**
		13:45	14:00	Role of the spin current induced generation of magnons in the current non-linear effects in ferromagnet/normal metal bilayers	Paul Noel
		14:00	14:15	Spin Hall magnetoresistance effect from a disordered interface (virtual)	Sara Catalano
		14:15	14:30	Spin Hall magnetoresistance and current density distribution in HM/FeCoB (HM=Ta,Pt) bilayers	Michaela Kuepferling
		14:30	14:45	Evidence of the interfacial asymmetric spin scattering at ferromagnet/platinum interfaces	Van Tuong Pham
		14:45	15:00	Tuning the spintronic properties of the ferroelectric Rashba semiconductor GeTe by alloying	Federico Fagiani
		15:00	15:15	Detection of Magnon Currents in EuS (virtual)	Montserrat Xochitl Aguilar Pujol

Session	Chaired by	Start	End	Title	Speaker
S15.2	Sara Catalano	**15:45**	**16:15**	**Ferromagnet-induced spin-orbit torques (virtual)**	**Kyung-Jin Lee (invited)**
		16:15	16:30	Spin orbit torque switching in coupled free layers systems	Vaishnavi Kateel
		16:30	16:45	Theory of magnetic spin and orbital Hall and Nernst effects in bulk ferromagnets (virtual)	Peter Oppeneer
		16:45	17:00	Large spin-orbit torques on ferromagnetic layer from orbital currents	Sachin Krishnia
		17:00	17:15	Unidirectional orbital magnetoresistance in light metal/ferromagnet bilayers	Shilei Ding
		17:15	17:30	Field-free magnetization switching in sputtering grown epitaxial Tm3Fe5O12 magnetic insulator thin films (virtual)	Sajid Husain
		17:30	17:45	Direct X-ray detection of the spin Hall effect in CuBi	Sandra Ruiz Gomez

Session	Chaired by	Start	End	Title Speaker
Posters	Marcin Wysokinski	18:15	19:15	Monday.P4 (virtual) 1. *Anastasiia Doroshenko* / Anomalous slow spin relaxation in [Gd2(H2O)6(C2O4)3]·2.5H2O complex induced by magnetic field. 2. *Liliia Kotvytska* / Realization of low-dimensional magnetism in zeolitic imidazolate frameworks 3. *Robert Ranecki* / Spin properties of high-spin ground state , 12-metallacrown-4 complexes on Au(111) investigated by inelastic tunneling spectroscopy 4. *Rodrigo Guedas García* / Reducing the temperature of nanostrips with a coating layer 5. *Shahin Alam* / Spin zero effect in nonmagnetic centrosymmetric dipnictides TaAs2 6. *Kateryna Boboshko* / Bilinear Magnetoresistance and Nonlinear Planar Hall Effect in Topological Insulators with Spin-Orbital Impurities 7. *Adam Cahaya* / Electron - Electron Repulsion Effect on Spin Mixing Conductance of Metallic Ferromagnet and Heavy Metal Interface 8. *Louis Farcis* / Spin-transfer torque induced dynamics in dual free layer p-MTJ

AULA C / ZOOM C | Monday, 25 July 2022

Session	Chaired by	Start	End	Title	Speaker
S6.1	Witold Skowronski	**10:15**	**10:45**	**Magnetic Ordering in van der Waals Halides with Weak Interlayer Coupling**	**Karel Carva (invited)**
		10:45	11:00	Detection of magnetic domains in two dimensional Fe3GeTe2 using spin-polarized scanning tunneling microscopy (virtual)	Namrata Bansal
		11:00	11:15	Exchange bias in molecule/Fe3GeTe2 van der Waals heterostructures via spinterface effects	Junhyeon Jo
		11:15	**11:45**	**van der Waals Ferromagnet Fe5GeTe2 -Graphene Heterostructure Spin-Valve Devices at Room Temperature**	**Saroj Dash invited)**
		11:45	12:00	Proximity effects between Cr2Te3 vdW ferromagnet and 2D materials	Quentin Guillet

Session	Chaired by	Start	End	Title	Speaker
S1.1	Célia Tavares de Sousa	**13:15**	**13:45**	**Magnetic Nanoparticles – Mediated Cancer Therapies and Magnetic Tissue Engineering (virtual)**	**Claire Wilhelm (invited)**
		13:45	14:00	Theoretical calibration factors of AC magnetometers for measuring magnetic fluid magnetization (virtual)	Zoe Boekelheide
		14:00	14:15	Influence of temperature on the relaxation signal of magnetic nanoparticles by magnetorelaxometry	Soudabeh Arsalani
		14:15	14:30	Innovative dynamic detection for early diagnosis with a lab-on-a-chip based on “two-stage” giant magnetoresistance sensors (virtual)	Maïkane Deroo
		14:30	14:45	Recording activity from mammalian tissue via induced biomagnetic field using colour centers in diamond	Jim Webb
		14:45	15:00	Magnetic bucket brigade networks as rails for single cell transportation	Findan Block

Session	Chaired by	Start	End	Title	Speaker
S12.1	Benjamin Spetzler	15:45	16:00	Single magnetic domain FeCoSiB multilayer-based magnetoelectric composites for biomagnetic field sensing	Dennis Seidler
		16:00	16:15	Nonergodic effects in the spin-glass CoCrFeMnNi high-entropy alloy: Thermoremanent magnetization and Thermal memory cell	Stanislav Vrtnik
		16:15	16:30	Ultrafast photo-induced dynamics of multi states switching of magnetization in garnets	Tomasz Zalewski
		16:30	16:45	Scanning NV Magnetometry for Magnetic Memory Devices	Liza Zaper
		16:45	17:00	z-Field Control Through Stack Design to Enable Field-Free Switching of VCMA-MRAM	Robert Carpenter
		17:00	17:15	Tuning strain-induced anisotropy of soft ferromagnetic structures	Balram Singh
		17:15	17:30	Voltage-driven giant modulation of magnetism in ferromagnetic metals with ultrahigh magnetocrystalline anisotropy	Xing-Long Ye
		17:30	17:45	Engineering of Spin-Transfer-Torque Perpendicular Magnetic Tunnel Junctions at Cryogenic Temperatures with Very Low Switching Voltages	Pedro Brandao Veiga

Session	Chaired by	Start	End	Title Speaker
Posters	Dariusz Sztenkiel	18:15	19:15	Monday.P5 (virtual) 1. *Akinobu Yamaguchi* / Spin transport properties in multilayer including Pt and NiO layers 2. *Aleksandr Kazakov* / Magnetotransport in Ferromagnetic Topological Crystalline Insulator Sn1-xMnxTe Thin Films 3. *Kacho Imtiyaz Ali Khan* / Topological Kagome ferromagnet Fe3Sn2 grown on Si-SiO2 substrates using Pt seed layer. 4. *Samuel Nalevanko* / Increasing superconducting transition temperature of Heusler ferromagnetic superconductor Ni2NbSn 5. *Anika Kiecana* / Magnetism, structure and magnetocaloric properties of Mn3Sn1-xZnxC antiperovskite carbide 6. *Karolina Kowalska* / Rear-earth-based magnetocaloric composites for magnetic refrigerators systems 7. *H Hanggai* / Optimization in Room Temperature Magnetocaloric Materials (MnFe)1.9(PSi) Fe-Rich Compounds 8. *Ivan Batashev* / A computer assisted search for the novel magnetocaloric materials 9. *Ivan Petryshynets* / Effect of the shear cutting parameters on the magnetic behavior of Fe-Si electrical steel

MICKIEWICZ AUDITORIUM / ZOOM 1 | Tuesday, 26 July 2022

Session	Chaired by	Start	End	Title	Speaker
Plenary	Burkard Hillebrands	08:15	09:05	Spin-orbit proximity in van der Waals heterostructures for logic devices	Felix Casanova
Semi-Plenary	Tomasz Story	09:15	09:55	Modeling of spin-Seebeck and spin-Peltier effects for magnetic textures	Oksana Chubykalo-Fesenko

Session	Chaired by	Start	End	Title	Speaker
S11.3	Katharina Franke	**10:15**	**10:45**	**Strain and ferromagnetic proximity induced spin reorientation transition in antiferromagnetic NiO films**	**Weronika Janus (invited)**
		10:45	11:00	Effect of strain-induced anisotropy on magnetization dynamics in Y3Fe5O12 thin films grown on Y3Al5O12	Adam Krysztofik
		11:00	11:15	Control of magnetoelastic coupling in Ni/Fe multilayers using He+ ion irradiation	Giovanni Masciocchi
		11:15	11:30	Ion implantation induced exchange bias in BCC Fe thin film	Sagar Sen
		11:30	11:45	Soft magnetic amorphous Co-Zr alloy by severe plastic deformation (virtual)	Andrea Bachmaier
		11:45	12:00	Imprinting magnetic micropatterns through geometrical transformation	Volker Neu
		12:00	12:15	Influence of the buffer layer on the nanoscale architecture in NdFeB ultrathin films (virtual)	Jimena Soler-Morala

Session	Chaired by	Start	End	Title	Speaker
S11.4	Volker Neu	**13:15**	**13:45**	**Disclosing the nature of asymmetric interface magnetism in Co/Pt multilayers (virtual)**	**Sara Laureti (invited)**
		13:45	**14:15**	**Influence of dusting layers on the magneto-ionic response of Ta/X/CoFeB/Y/MgO/HfO2 thin film stacks (virtual)**	**Tanvi Bhatnagar-Schöffmann (invited)**
		14:15	14:30	Electronic structure and magneto-optical Kerr effect spectra of W/Co/Pt layered systems (virtual)	Adam Bonda
		14:30	14:45	Complex spin structures of ultrathin Fe/Ir films on Re(0001)	Felix Nickel
		14:45	15:00	Interplay of magnetic states and hyperfine fields of iron dimers on MgO(001) (virtual)	Sufyan Shehada
		15:00	15:15	Direct On-chip EMI Shielding Layer with Metallic/Magnetic Multilayer for sub-100 MHz frequency range (virtual)	Akira Kikitsu

Session	Chaired by	Start	End	Title	Speaker
S11.5	Weronika Janus	**15:45**	**16:15**	**Ultrathin ferrimagnetic GdFeCo films with very low damping**	**Lakhan Bainsla (invited)**
		16:15	**16:45**	**Designing compensated Co/Gd ferrimagnets for advanced room temperature spintronic devices**	**Thomas Kools (invited)**
		16:45	17:00	A quantum-mechanical study of anomalous magneto-volumetric behavior of ferrimagnetic Ni31Mn25Sn8 alloy (virtual)	Martin Friák
		17:00	17:15	Magnetic properties of FeGa/Kapton for flexible electronics	Gajanan Pradhan
		17:15	17:30	Control of magnetic properties in ferrimagnetic GdFe and TbFe thin films by He+ and Ne+ irradiation	Michal Krupinski
		17:30	17:45	Size effect on All Optical Switching in GdFeCo	Gweha Danny

Session	Chaired by	Start	End	Title Speaker
Posters	Khrystyna Levchenko	18:15	19:15	Tuesday.P1 (virtual) 9. *Anca Emanuela Minuti* / A ferrofluid based on Fe-Cr-Nb-B magnetic particles for biomedical application 10. *Liudmyla Omelchenko* / Pseudogap and excess conductivity in YBa2Cu3O7-δ single crystals under electron irradiation 11. *Pavlo Baloh* / Correlation between As-S nanocluster structures and low-temperature anomalies in amorphous solids 12. *Uladzislau Makartsou* / Control of the magnetization in ferromagnetic rings using ferromagnetic nanoelement 13. *Abbass Hamadeh* / Parametric amplification of spin waves by surface acoustic waves 14. *Nikolai Kuznetsov* / Spin-wave propagation and interference in microscopic YIG waveguides with submicron magnonic crystals 15. *Matthew McMaster* / Tunable NiFe Multilayers for High Frequency Applications 16. *Sachin Krishnia* / Giant Rashba spin-orbit torque in atomically thin metallic Pt|Co|Al|Pt multilayers 17. *Anna Krzyżewska* / Nonlinear Hall effect induced by Berry curvature dipole in a~two-dimensional system with k-cubed form of Rashba spin-orbit interaction

OLD LIBRARY / ZOOM 2 | Tuesday, 26 July 2022

Session	Chaired by	Start	End	Title	Speaker
Semi-plenary	Alberto Bollero	09:15	09:55	Emerging research landscape of altermagnetism	Tomas Jungwirth

Session	Chaired by	Start	End	Title	Speaker
S14.3	Andrii Chumak	10:15	10:30	Ultrafast Optically Induced Ferromagnetic State in an Elemental Antiferromagnet	Wolfgang Kuch
		10:30	10:45	Ultrafast metamagnetic phase transition in FeRh driven by non-equilibrium electron dynamics	Vojtěch Uhlíř
		10:45	11:00	Purely Precessional All-Optical Femtosecond Magnetic Switching	Luis Sánchez-Tejerina
		11:00	11:15	Unravelling the Transient Depth Magnetic Profile During Ultrafast Demagnetization of an Iron Thin Film (virtual)	Emmanuelle Jal
		11:15	11:30	Spin-lattice couplings and their effects in transition-metal magnetic crystals with ab-initio accuracy	Ivan Miranda
		11:30	11:45	Reliable all-optical-switching in Tb/Co multilayers based tunnel junctions	David Salomoni
		11:45	12:00	Ultrafast coherent all-optical switching of antiferromagnets	Tobias Dannegger
		12:00	12:15	All-optical switching on the nanometer scale excited and probed with femtosecond extreme ultraviolet pulses	Kelvin Yao

Session	Chaired by	Start	End	Title	Speaker
S14.4	Sebastian Wintz	**13:15**	**13:45**	**Terahertz spin and charge currents: Insights into ultrafast spintronics and novel terahertz photonic applications**	**Tom Seifert (invited)**
		13:45	14:00	Spintronic detection of terahertz magnetic fields via Zeeman torque	Alexander Chekhov
		14:00	14:15	THz-light driven spin-lattice coupling in cobalt difluoride.	Evgeny Mashkovich
		14:15	14:30	Effect of Cu doping on the emission of terahertz radiation from CoFeB/Pt1-xCux spintronic thin films	Charlotte Bull

		14:30	14:45	Cavity-mediated magnon-magnon coupling at 0.3 THz	Marcin Białek
		14:45	15:00	Inverse magneto-plasmonics for laser-induced spin dynamics	Ilya Razdolski
		15:00	15:15	Towards fast exchange magnonics: partially compensated Ga:YIG garnets	Khrystyna Levchenko

Session	**Chaired by**	**Start**	**End**	**Title**	**Speaker**
S3.2	Benjamin Verlhac	**15:45**	**16:15**	**Topological effects in different magnetic spin ice geometries**	**Ana Parente (invited)**
		16:15	**16:45**	**Quantitative analysis of the magnetic field distribution in an artificial spin ice by off-axis electron holography**	**Teresa Weßels (invited)**
		16:45	17:00	Magnetic defect-driven dynamics in artificial spin ice	Robert Puttock
		17:00	17:15	Ice regime and approximate of the low-energy physics of the F-model in a two-dimensional artificial vertex system (virtual)	N. Rougemaille
		17:15	17:30	Magnetic-Field-Dependent Thermodynamic Properties of Square and Quadrupolar Artificial Spin Ice	Mateusz Goryca

Session	Chaired by	Start	End	Title Speaker
Posters	Natalia Shkodich	18:15	19:15	Tuesday.P2 (virtual) 9. *Nathan Hale* / The 4 ×4 transfer matrix method: a flexible and computationally efficient tool for exploring a system's surface magnon polaritons 10. *Yuan Hong* / A High Throughput Study of Hard Magnetic CeCo5-based Thin Films 11. *Florian Jürries* / Stability of MnAl-C magnet alloys in the presence of water 12. *Dariusz Sztenkiel* / Crystal field model simulations of magnetic response of pairs, triplets and quartets of Mn3+ ions in GaN 13. *Yuliia Veretennikova* / Capping layer influence on magnetic characteristics evolution in cobalt nanofilms 14. *Jiří Kaštil* / Exchange spring and exchange bias effects in the bulk Heusler Ni2MnSn-based alloys 15. Pardeep Kuma Tanwar / Chiral zero sound – a new mechanism for heat conduction in Weyl semimetal NbP 16. *Jakub Mojsiejuk* / Numerical model of current induced magnetisation spin-orbit torque switching

AULA A / ZOOM A | Tuesday, 26 July 2022

Session	Chaired by	Start	End	Title	Speaker
S9.2		**10:15**	**10:45**	**Inverse magnonics with SpinTorch**	**Adam Papp (invited)**
		10:45	11:00	Micromagnetic simulation of soft magnetic composites utilizing periodic boundary conditions	Amil Ducevic
		11:00	11:15	Three-dimensional Magnetic Textures in Strongly Coupled Cylindrical Nanowires	John Fullerton
		11:15	11:30	Coercivity analysis of twin boundaries in arbitrary field direction by micromagnetic simulations (virtual)	Markus Gusenbauer
		11:30	11:45	Mode selective excitation of spin-waves utilizing spin-wave conversion	Takuya Taniguchi
		11:45	12:00	Micomagnetic simulations of Microwave Assisted Switching in Hard/Soft phase nanowires (virtual)	Ioannis Panagiotopoulos
		12:00	12:15	Thermal Agitation of Magnetization Dynamics Induced by Electric-field (virtual)	Shun Kanai

Session	Chaired by	Start	End	Title	Speaker
S13.3	Johanna Fischer	**13:15**	**13:45**	**Current-induced control of chiral magnetic textures in magnetic insulators**	**Saul Velez (invited)**
		13:45	14:00	Electric field control of chiral magnetic textures in multilayer films with perpendicular magnetic anisotropy	Cristina Balan
		14:00	14:15	Current induced domain wall dynamics in chemical modulated nanowires	Laura Álvaro Gomez
		14:15	14:30	Exchange anisotropy and a new spiral state in the insulating chiral magnet Cu2OSeO3	Victor Ukleev
		14:30	14:45	Over 1 km/s Current Induced Skyrmion Motion in Synthetic Antiferromagnet without Skyrmion Hall Effect	Van Tuong Pham
		14:45	**15:15**	**Magnetic Skyrmions in Electrically Insulating Magnets (virtual)**	**Aisha Aqeel (invited)**

Session	Chaired by	Start	End	Title	Speaker
S13.4	Johannes Kleinlein	**15:45**	**16:15**	**Topological magnon band structure of emergent Landau levels in a skyrmion lattice**	**Tobias Weber (invited)**
		16:15	16:30	Phase formations in skyrmion ensembles with anisotropic interaction	Daniel Schick
		16:30	16:45	Emergent responses in magnetic ring arrays of different lattice arrangements for reservoir computing	Guru Venkat
		16:45	17:00	Observation of metastable skyrmion lattice in NdMn2Ge2 at room temperature	Samuel Treves
		17:00	17:15	The Interplay between Skyrmions and Thermal Magnons	Markus Weißenhofer
		17:15	17:30	Domain wall automotion for three-dimensional magnetic interconnectivity	Claire Donnelly
		17:30	17:45	Current- and Oersted-field- dynamics of a Bloch Point in cylindrical Ni nanowires	Jose Fernandez-Roldan

Session	Chaired by	Start	End	Title Speaker
Posters	Monika Zięba	18:15	19:15	Tuesday.P3 (virtual) 9. *Iwona Lazar* / Defect-driven magnetic properties of PZT single crystals 10. *Dominik Legut* / MAELAS: MAgneto-ELAStic properties calculation via computational high-throughput approach 11. *Nakai Shinji* / Thermal Equilibrium Compositions of Divalent Cation Substituted W-type Ferrites 12. Sviatoslav Vovk / Influence of the temperature on electro-magnetic properties of hybrid SMC material 13. *Thomas Mueller* / DNS - diffuse neutron scattering spectrometer at MLZ 14. *Claudio Gonzalez-Fuentes* / Induction magnetometer with micro-emu sensitivity 15. *Sawssen Slimani* / Colossal magnetoresistance (CMR) and Density functional theory in La0.4Ag0.2Ca0.4MnO3 polycrystal 16. *Anna Hellenes* / Giant and tunneling magnetoresistance in unconventional collinear antiferromagnets with *nonrelativistic spin-momentum coupling*

AULA B / ZOOM B | Tuesday, 26 July 2022

Session	Chaired by	Start	End	Title	Speaker
S15.3	Paul Noel	**10:15**	**10:45**	**Large spin orbit torque via magnetic spin Hall effect in the topological antiferromagnet**	**Kouta Kondou (invited)**
		10:45	11:00	Magneto thermal transport in non collinear antiferromagnetic thin films	Sebastian Beckert
		11:00	11:15	Anisotropic magnetoresistance in systems with non-collinear magnetic order	Philipp Ritzinger
		11:15	11:30	Anomalous Nernst effect in τ-MnAl thin lms	Daniel Scheffler
		11:30	11:45	Spin transport as a probe of non-linear fluctuations at the spin glass transition in Pd1-xNix alloys	Miina Leiviskä
		11:45	12:00	Inverse spin-Hall effect in GeSn (virtual)	Federico Bottegoni
		12:00	12:15	Effect of seed layer thickness on Ta crystalline phase and spin Hall angle	Sriram Kasilingam

Session	Chaired by	Start	End	Title	Speaker
S8.2	Joao H. Belo	**13:15**	**13:45**	**Iron Nitride: a Non-Rare-Earth Containing Permanent Magnet (virtual)**	**Francis Johnson (invited)**
		13:45	14:00	Fabrication and characterization of Sm-based ThMn12-type compounds for applications as permanent magnets	Andrés García Franco
		14:00	14:15	Formation of ThMn12-type phase in (Zr, Nd)0.4Ce0.6Fe10Si2 alloys and the role of Nd substitution	Mieszko Kołodziej
		14:15	14:30	High Pressure Reactive Milling of Nd2Fe14B-based alloys (virtual)	Imants Dirba
		14:30	14:45	In search for new rare earth free permanent magnets in CoFeTa system	Dominik Legut
		14:45	15:00	Nitrogenation study of Nd(Fe,Mo)12 compounds produced by Strip Cast methods	Ryan Sedek
		15:00	15:15	Novel Processing of Nano-Composite Magnets for Improved Remanence and Coercivity (virtual)	Lukas Schäfer

Session	Chaired by	Start	End	Title	Speaker
S8.3	Oksana Chubykalo-Fesenko	**15:45**	**16:15**	**Developing Near Room-Temperature Magnetic Refrigerators: Lessons Learned and Future Challenges (virtual)**	**Jader Barbosa Jr. (invited)**
		16:15	16:30	Anomalous Nernst Effect in Polycrystalline MnBi	Alessandro Sola
		16:30	16:45	Anomalous Nernst effect on magnetic multilayers with perpendicular magnetic anisotropy (virtual)	Agustina Asenjo
		16:45	17:00	Induction-heated magnetic nanoparticles for catalytic hydrogen production	Cathrine Frandsen
		17:00	17:15	Magnetically Actuated Thermal Switch System: A Performance Evaluation (virtual)	Vivian Andrade
		17:15	17:30	Magnetocaloric Effect direct measurement through Time-Dependent Magnetometry	João H. Belo
		17:30	17:45	Two terminal quantum dot hybrid system as a heat engine	Emil Siuda

Session	Chaired by	Start	End	Title Speaker
Posters	Archana Mishra	18:15	19:15	Tuesday.P4 (virtual) 9. *Jagannath Jena* / Stability of antiskyrmions and elliptical Bloch skyrmions in a D2d system 10. *Anastasiia Korniienko* / Magnetic configurations in Fe32Co68 core-shell nanostructures with hexagonal cross-section 11. *Santiago Osorio* / Response of the chiral soliton lattice to spin polarized currents 12. *Susant Acharya* / Ionic Liquid Gating Control of Magnetic Anisotropy in Magnetic Tunneling Junction Stacks for Voltage Tunable Magnetoresistive Sensor 13. *Łukasz Fuśnik* / Bias voltage dependence of sensitivity in tunneling magnetoresistance sensors with voltage controlled magnetic anisotropy 14. *Ralf Hemm* / Spin-dependent interfacial band structure and charge transfer phenomena at the C60/graphene interface on Ni(111) 15. *Stefan Stagraczyński* / Magnetism in van der Waals materials 16. *Alexander Welbourne* / Voltage Controlled Superparamagnetic Ensembles for Low Power Reservoir Computing

AULA C / ZOOM C | Tuesday, 26 July 2022

Session	Chaired by	Start	End	Title	Speaker
S10.1	Aleksandr Kazakov	**10:15**	**10:45**	**Characterization of magnetic properties of thin films and near-surface regions by low-energy muon spin spectroscopy**	**Thomas Prokscha (invited)**
		10:45	11:00	Many-Body Quantum Effects of Muons	Matjaž Gomilšek
		11:00	11:15	Hardware, methodology and applications of backscatter Mossbauer spectroscopy with simultaneous X-ray and gamma detection (virtual)	Jack O'Brien
		11:15	11:30	Phase detection using GMI in Ni2FeGa glass-coated microwires (virtual)	Rastislav Varga
		11:30	11:45	Magnetometry of nanocrystalline materials in controlled gas atmospheres at high temperatures	Thomas Veile
		11:45	12:00	Ultra-thin free standing graphene membranes for enhanced performances in spin detection	Luca Nessi

Session	Chaired by	Start	End	Title	Speaker
S6.2	Maciej Molas	**13:15**	**13:45**	**Electrical and thermal generation of spin currents by magnetic graphene**	**Talieh Ghiasi (invited)**
		13:45	14:00	Spin and charge carrier dynamics at a CuPc/WSe2 heterostructure	Gregor Zinke
		14:00	14:15	Brightening of the dark excitons due to the proximity effect	Łucja Kipczak
		14:15	14:30	Quantitative Magnetometry on Nanostructured MBE Grown 2D In-Plane Ferromagnet	Patrick Reiser
		14:30	14:45	Van der Waals epitaxy of 2D ferromagnetic Cr(1+δ)Te2 nanolayers	Kinga Lasek
		14:45	15:00	Scarce ferromagnetic interactions in monolayers of MPS3 (virtual)	Magdalena Birowska
		15:00	15:15	Magnetotransport properties of TaAs layers grown by MBE on GaAs (001) substrates	Zuzanna Ogorzałek

Session	Chaired by	Start	End	Title	Speaker
S17.1	Gustav Bilhmayer	**15:45**	**16:15**	**Artificial Magnetic Domains Without Domain Walls in Rare Earth-Transition Metal Films Patterned by Ion Bombardment**	**Piotr Kuświk (invited)**
		16:15	**16:45**	**Low-temperature magnetic phase transition in TbAl3(BO3)4 - quantum and classical aspects**	**Andrzej Szewczyk (invited)**
		16:45	17:00	Interplay between the two magnetic phases of La2NiMnO6 and their impact on the oxygen evolution reaction	Jasnamol Palakkal
		17:00	17:15	Antiphase Boundaries in Ni-Mn-Ga Single Crystal Exhibiting Magnetic Shape Memory Effects	Oleg Heczko
		17:15	17:30	Measuring the magnetoelectric coupling of piezoelectric/magnetostrictive nanostructures using the anisotropic magnetoresistance effect	Anaïs Guerenneur
		17:30	17:45	Effect of Nanoindentation on Martensitic Phase Transition of Heusler Films Studied by High-Resolution Imaging in Temperature (vitual)	Francesca Casoli

AULA D / ZOOM D | Tuesday, 26 July 2022

Session	Chaired by	Start	End	Title	Speaker
S4.2	Kamil Olejnik	**10:15**	**10:45**	**Epitaxial strain tailoring of the antiferromagnetic properties in LaFeO3 thin films**	**Vincent Polewczyk (invited)**
		10:45	11:00	Role of substrate clamping on anisotropy and domain structure in the canted antiferromagnet α-Fe2O3	Angela Wittmann
		11:00	11:15	Impact of magnetoelastic coupling on antiferromagnetic spintronics	Sonka Reimers
		11:15	11:30	Gradient magnetoelasticity: tailoring of antiferromagnetic textures	Olena Gomonay
		11:30	11:45	False antiferromagnetic component in ferromagnetic La5Co2Ge3 under pressure (virtual)	Marcin Wysokinski
		11:45	**12:15**	**Shape Anisotropy in Antiferromagnetic structures (virtual)**	**Hendrik Meer (invited)**

Session	Chaired by	Start	End	Title	Speaker
S4.3	Olena Gomonay	**13:15**	**13:45**	**Magnonic Hanle Effect in Easy-Plane Antiferromagnets**	**Matthias Opel (invited)**
		13:45	14:00	Ferromagnetic resonance study of acoustic, optic and mixed excitations in Ru/Cr/Co and Ru/Co multilayers (virtual)	Panagiota Ntetsika
		14:00	14:15	Current induced magnetization field free switching in exchange biased Pt(W)/Co/NiO heterostructures	Krzysztof Grochot
		14:15	14:30	XPEEM Imaging of Magneto-acoustic Waves at GHz Frequency	Muhammad Waqas Khaliq
		14:30	14:45	Quenching of an antiferromagnet into high resistivity states using electrical or ultrashort optical pulses	Zdenek Kaspar
		14:45	15:00	Exchange bias effects in Co/CoO coupled with molecular layers	Ilaria Bergenti
		15:00	15:15	Spin-transfer torque in non-collinear antiferromagnetic junctions	Jakub Železný

Session	Chaired by	Start	End	Title	Speaker
S7.1	Magdalena Fitta	**15:45**	**16:15**	**Magnetic molecular systems to tune 2D materials properties**	**Alicia Forment-Aliaga**
		16:15	16:30	Nanostructuring magnetic systems by means of a 2D Metalorganic Network	Fernando Bartolomé
		16:30	16:45	Effect of proton irradiation on magnetic properties of two-dimensional Ni(II) molecular magnet	Dominik Czernia
		16:45	17:00	Magnetic superexchange controlled by light in the family of molecular photomagnets	Michał Magott
		17:00	17:15	Giant Spin Pumping at Ferromagnet (Permalloy) - Organic Semiconductor (Perylene diimide) Interface (virtual)	Manoj Talluri
		17:15	17:30	[Co(NCS)2(L)2]n spin chains: a new relaxation pathway observed for single crystal samples	Magdalena Foltyn
		17:30	17:45	Spectroscopic and elastic properties of some Heusler alloys which were predicted to be Spin-Gapless-Semiconductors or Half-Metallic Ferromagnets	Jerzy Goraus

MICKIEWICZ AUDITORIUM / ZOOM 1 | Wednesday, 27 July 2022

Session	Chaired by	Start	End	Title	Speaker
Plenary	Olivier Fruchart	08:15	09:05	Hard magnetic films: from material studies to micro-system applications	Nora Dempsey
Semi-Plenary	Andrzej Twardowski	09:15	09:55	Spintronics for Green Society (virtual)	Hideo Ohno

Session	Chaired by	Start	End	Title	Speaker
S11.6	**Tomasz Stobiecki**	**10:15**	**10:45**	**Asynchronous current-induced switching of rare-earth and transition-metal sublattices in ferrimagnetic alloys**	**Giacomo Sala (invited)**
		10:45	11:00	Nucleation and current-induced bubble structures motion in PMA multilayers	Jorge Marqués-Marchán
		11:00	11:15	Competition Between Interparticle Coupling and Demagnetizing Effects in Soft Magnetic Iron Composites	Samuel Dobák
		11:15	11:30	Weak ferromagnetism linked to the high-temperature spiral phase of YBaCuFeO5	Jike Lyu
		11:30	11:45	Optimisation of perpendicular magnetic tunnel junction structures using STEM	Meg Smith
		11:45	12:00	Noncollinear coupling of Co layers across RuCo spacer layers	Erol Girt
		12:00	12:15	Flexible magnetic nanostructures: differentiated control of the magnetization	Challab Nabil

Session	Chaired by	Start	End	Title / Speaker
Special session	Burkard Hillebrands	13:15	15:00	EMA Awards Special Session The European Magnetism Association (EMA) awards session followed by presentations from the 2021 and 2022 awardees. 13:40 Anomalous Hall responses in unconventional d-wave magnets | Libor Smejkal 14:20 Large antiskyrmions and small scalar spin chirality fluctuations | Jan Masell

Session	Chaired by	Start	End	Title Speaker
Posters		15:30	16:30	Wednesday.P1 (virtual) 18. *Konrad Puzniak* / Study of the spin-1/2 antiferromagnetic XXZ chain SrCo2V2O8 in a transverse external magnetic field 19. *Shruti Chakravarty* / Disorder driven cluster glass state in a geometrically frustrated hexagonal perovskite 20. *Arturo Rodríguez Sota* / Magnetism and growth of a Mn monolayer on Ir (111) investigated by SP STM 21. *Maria Stamenova* / Resistance of atomically sharp domain walls in CuMnAs from first principles 22. *Hatem Ben Mahmoud* / Magneto-mechanical properties of thin films on stretchable substrate measured by in situ MOKE 23. *Matilde Saura-Múzquiz* / Phase transition, hidden order and magnetic structure of complex scheelites 24. *Danny Thonig* / Spin-mixed states in non-collinear magnets 25. *Katarzyna Gas* / In Situ Compensation Methods for Precise Integral Magnetometry of Miniscule Powder Specimens and Thin Layers (2D) on Bulky Substratesdipole in a~two-dimensional system with k-cubed form of Rashba spin-orbit interaction

OLD LIBRARY / ZOOM 2 | Wednesday, 27 July 2022

Session	Chaired by	Start	End	Title	Speaker
Semi-plenary	Andrzej Stupakiewicz	09:15	09:55	Can photons generate magnetization in non-magnetic materials? - design of molecular photomagnets via the photochemical route	Dawid Pinkkowicz

Session	Chaired by	Start	End	Title	Speaker
S12.2	Olivier Fruchart	**10:15**	**10:45**	**Tunnel magnetoresistive sensor architectures for 2D and 3D fields detection**	**Susana Cardoso (invited)**
		10:45	11:00	Exchange-Bias Delta-E Effect Magnetic Field Sensors for Sensor Arrays	Benjamin Spetzler
		11:00	11:15	Magnetic tunnel junctions with a symmetric response for ultra-sensitive sensors	Samuel Manceau
		11:15	11:30	Improved dynamical switching properties in Perpendicular Shape Anisotropy Magnetic Tunnel Junctions	Nuno Caçoilo
		11:30	11:45	Spin orbit torque enabled magnetic sensor with low offset and tunable sensitivity	Sebastian Zeilinger
		11:45	**12:15**	**Magnetic Sensors Based on Amorphous and Nano materials**	**Pavel Ripka (invited)**

Session	Chaired by	Start	End	Title Speaker
Posters	Piotr Wisniowski	15:30	16:30	Wednesday.P2 (virtual) 17. *Alonso J. Campos-Hernandez* / Study of the magnetic interactions in FeNi nanowires through coercivity angular measurements and FORC analysis 18. *Javier Díaz* / Vortex chirality observation in trilayer disks of Fe/Al/Co using X ray resonant magnetic scattering 19. *Amar Fakhredine* / Huge Dzyaloshinskii-Moriya interactions in Re/Co[n]/Pt thin films 20. *Łukasz Frąckowiak* / Experimental Results and Numerical Calculation of Co-Tb Distribution from Magnetron Co-Sputtering Deposition with a Composition Gradient 21. *Martin Friák* / An ab initio study of antiphase boundaries in ferromagnetic B2-phase Fe2CoAl alloy 22. *Jaydeb Dey* / 55Mn NMR investigations on Mn2GaC nanolaminated thin film 23. *Mattia Benini* / In-depth modification in Co thin films induced by the interfacing with molecular layers detected by Zero-Field NMR

AULA A / ZOOM A | Wednesday, 27 July 2022

Session	Chaired by	Start	End	Title	Speaker
S13.5	Saul Velez	**10:15**	**10:45**	**Unveiling mechanisms of temperature dependence of PMA and DMI at MgO based and 2D materials based interfaces**	**Fatima Ibrahim (invited)**
		10:45	11:00	Direct observation of bulk-DMI-stabilized Néel-type domain walls in ferrimagnetic rare-earth transition-metal alloys	Daniel Metternich
		11:00	11:15	Magnetic domain evolution in W/Co/Pt ultrathin epitaxial layers approaching the superparamagnetic Co thickness regime	Piotr Mazalski
		11:15	11:30	Stabilizing skyrmions in Pt/Co/Tb multilayers with reduced magnetization	Sougata Mallick
		11:30	11:45	Facilitating Skyrmion Nucleation in Ir/Co/Pt Multilayers With Ga+ Ion Irradiation	Mark De Jong
		11:45	12:00	Non-collinear three-dimensional textures in magnetic multilayers: the emergence of skyrmionic cocoons	Matthieu Grelier
		12:00	12:15	Investigation of self-nucleated skyrmion states in the ferromagnetic/nonmagnetic multilayer dot	Iuliia Vetrova

Session	Chaired by	Start	End	Title Speaker
Posters	Philipp Pirro	15:30	16:30	Wednesday.P3 (virtual) 17. *Fabian Kammerbauer* / Current-induced interlayer DMI in synthetic antiferromagnets 18. *Lara Solis* / FMR and thermal spin pumping enhanced by perpendicular anisotropy in YIG/Pt bilayers 19. *Ghulam Hussain* / Intrinsic spin Hall effect in Nb-based A15 compounds 20. *Izabella Wojciechowska* / Topological transport properties of ex-so-tic van-der-Waals structures 21. *Alexander Wright* / Thermal scanning probe lithography as a technique for fabrication of non-local spin 22. *Célia T Sousa* / Multifunctional Fe Au nanostructures synthesized by Laser Ablation in Liquids 23. *Michal Varga* / Ni2FeZ (Z = Ga, In, Tl) Heusler alloy nanowires prepared via electrodeposition 24. *Nataliia Tataryn* / Valence Band Dispersion in (Ga,Mn)As, Ga(Bi,As), (Ga,Mn)(Bi,As) epitaxial nanolayers 25. *Eugene Petrenko* / Coherence lengths determination for optimally-doped YBa2Cu3O7-δ

AULA B / ZOOM B | Wednesday, 27 July 2022

Session	Chaired by	Start	End	Title	Speaker
S16.1	Karel Carva	**10:15**	**10:45**	**Superexchange dominates in magnetic topological insulators (virtual)**	**Cezary Śliwa (invited)**
		10:45	11:00	Interplay between magnetism and topology in correlated topological materials (virtual)	Yixi Su
		11:00	11:15	Magnetic Properties of Intrinsic Magnetic Topological Insulators Mn(Bi,Sb)Te	Michael Wissmann
		11:15	11:30	Spin-Orbit torques and magnetization switching in topological-insulator/2D-ferromagnet heterostructures: MBE-grown CrTe2/Bi2Te3	Nicholas Fgueiredo-Prestes
		11:30	11:45	Study on spin-orbit-torque-induced magnetization modulation using rectifying planar Hall effect (virtual)	Akinobu Yamaguchi
		11:45	**12:15**	**The ferromagnetic topological insulator MnSb2Te4**	**Oliver Rader (invited)**

Session	Chaired by	Start	End	Title Speaker
Posters	Giuseppe Cuono	15:30	16:30	Wednesday.P4 (virtual) 17. *Andrea Peralta* / Observation of spin textures in La0.7Sr0.3MnO3 / SrIrO3 bilayers 18. *Dariia Popadiuk* / Study of gyrovector of magnetic hopfions 19. *Subhajit Roy* / Modification of domain wall velocity in Ta/CoFeB/MgO due to voltage-induced non-volatile piezoelectric strain 20. *Anuj Dhiman* / Magnetic properties of ultrathin Pt/Co/Re and Re/Co/Pt layers 21. *Lucia Fecova* / Direct Correlation Between Domain Wall Distortions and Perpendicular Fields in Amorphous Glass-Coated Microwires 22. *Soumyajyoti Haldar* / Distorted 3Q state driven by topological-chiral magnetic interaction 23. *Mirali Jafari* / DFT study of the electronic and magnetic properties of monolayer and bilayer of VS2 24. *Kausik Das* / Magnetic Dynamical Properties and Ferromagnetic Resonance in (Ga,Mn)N Layers

AULA C / ZOOM C | Wednesday, 27 July 2022

Session	Chaired by	Start	End	Title	Speaker
S1.2	Jeffrey McCord	**10:15**	**10:45**	**Magnetomechanical actuation of microdisks and magnetoelastic membranes used as bioreactor for pancreatic cells stimulation**	**Helene Joisten (invited)**
		10:45	11:00	Magnetic properties of Fe vortex nanodiscs and nanowires for emerging biomedical applications.	Celia Sousa
		11:00	11:15	Room-temperature synthesis of AuFe solid solution nanoparticles and their transformation to Au/Fe Janus nanostructures	Mariia Efremova
		11:15	11:30	Single-domain particle heating in a viscous fluid (virtual)	Santiago Helbig
		11:30	11:45	Factors affecting Magnetic Particle Imaging: Challenges and Solutions (virtual)	Paola Tiberto
		11:45	**12:15**	**Flexible and printed electronics: from interactive on-skin devices to bio/medical applications**	**Denys Makarov (invited)**

Session	Chaired by	Start	End	Title Speaker
Posters	Aleksandr Kazakov	15:30	16:30	Wednesday.P5 (virtual) 1. *Florian Slanovc* / Global Magnetic Topology Optimization 2. *Elizaveta Golubeva* / Magnetic noise and loss in magnetoelastic magnetic field sensors 3. *Viola Krizakova* / Dual-pulse strategies for efficient switching of magnetic tunnel junctions 4. *Gabriel Gomez Eslava* / Simultaneous measurements of XMCD, bulk magnetization, magnetostriction and temperature change: a HoCo2 case study 5. *Sou Jinnouchi* / Susceptibility of a Small Diamagnetic Particle Detected from its Parabolic Trejectory Produced by Small Nd magnets in Terrestrial Gravity 6. *Han Yin Poh* / Quantification of Spin Accumulation Magnetoresistance in Ferromagnetic heterostructure using DC Bias Harmonic Hall Measurement 7. *Archana Mishra* / Yu-Shiba-Rusinov qubit 8. *Sarath Prem* / Berry-phase induced entanglement of electron spins coupled to a microwave cavity 9. *Hidenori Nakagawa* / An ELF magnetic Control Study for Metamorphic Qualities in Thyroxine-Administrated Axolotls (Ambystoma mexicanum)

AULA D / ZOOM D | Wednesday, 27 July 2022

Session	Chaired by	Start	End	Title	Speaker
S5.1		**10:15**	**10:45**	**Experimental Demonstration of Reservoir Computation using Emergent Domain Wall Dynamics in a Patterned Magnetic Substrate**	**Ian Vidamour**
		10:45	11:00	Machine learning informing computational modelling of complex magnetic spin textures	Vanessa Nehruji
		11:00	11:15	Serial and Parallel Magnetic Tunnel Junction Configuration for RF applications and neuromorphic computing.	Piotr Rzeszut
		11:15	11:45	**Neuromorphic Spin-Wave Computing in Hybrid Multi-Array Nanomagnetic Architectures (virtual)**	**Jack Carter-Gartside**
		11:30	11:45	Stochastic Computing and Machine Learning with Magnetic Domain Walls	Alexander Welbourne

MICKIEWICZ AUDITORIUM / ZOOM 1 | Thursday, 28 July 2022

Session	Chaired by	Start	End	Title	Speaker
Plenary	Tomas Jungwirth	08:15	09:05	From Spin-Orbitronics to Orbitronics – novel science and applications in memory & non-conventional computing	Mathias Kläui
Semi-Plenary	Nora Dempsey	09:15	09:55	Revealing three-dimensional spin textures, and their dynamics, with X-rays	Claire Donnelly

Session	Chaired by	Start	End	Title	Speaker
S11.7	Alberto Bollero	**10:15**	**10:45**	**The exceptional magnetic and magnetotransport characteristics of thin film Heusler alloy Co2MnGa – a room temperature Weyl ferromagnet**	**Simon Granville (invited)**
		10:45	11:00	Current Induced Crystallisation in Heusler Alloy Films for Memory Potentiation in Neuromorphic Computation	Atsufumi Hirohata
		11:00	11:15	Impact of the Magnetic Subsystem on the Low-temperature Specific Heat of Metamagnetic Shape Memory Alloy (virtual)	Anna Kosogor
		11:15	11:30	Magnetic nanocrystalline CoCrFeNiGax (x = 0.5, 1.0) high entropy alloys by high energy ball milling	Natalia Shkodich
		11:30	11:45	Exchange-coupled collective magnetism of a two-phase single-crystalline nanocomposite FeCoCrMnAl high-entropy alloy (virtual)	Darja Gačnik
		11:45	12:00	Effect of transition metal doping on magnetic hardness of CeFe12-based compounds.	Justyn Snarski-Adamski
		12:00	12:15	Effect of bending strain on magnetic anisotropy in epitaxial ferrite thin films on mica.	Darla Mare

Session	Chaired by	Start	End	Title	Speaker
S11.8	Piotr Kuświk	**13:15**	**13:45**	**Chirality and magnetism – new phenomena**	**Lech Tomasz Baczewski (invited)**
		13:45	14:00	Chemical and Magnetic order of FeRh nanoparticles deposited on BaTiO3 (001) and SrTiO3 (001) (virtual)	Guillermo Alberto Herrera Huerta
		14:00	14:15	Magnetic domain wall pinning in cobalt ferrite microstructures	Sandra Ruiz-Gomez
		14:15	14:30	Influence of antidote form on magnetic resonance response (virtual)	Sergey Nedukh
		14:30	14:45	Superparamagnetic particles for micro-inductor applications	Mathias Zambach
		14:45	15:00	Picosecond Optospintronic Tunnel Junctions for Non-volatile Photonic Memories	Luding Wang
		15:00	15:15	Synthesis and characterization of Fe3O4@MgO@CoFe2O4 core/shell/shell magnetic nanoparticles	Jorge Martín Nuñez

Session	Chaired by	Start	End	Title	Speaker
S11.9	Lech T. Baczewski	**15:45**	**16:15**	**Controlled Self-Assembly and Study of Engineered Magnetic Nanostructures**	**Mehran Sedrpooshan (invited)**
		16:15	16:30	Chemically modulated Fe-Ni cylindrical nanowires with asymmetric magnetic response	Claudia Fernández-González
		16:30	16:45	Crystal quality assessment of highly Bi-doped electrodeposited Cu nanowires for spintronics applications	Alejandra Guedeja-Marron
		16:45	17:00	Fabrication of rare-earth free permanent magnets for MEMS applications: magnetophoresis assembly of Co nanorods (virtual)	Ilona Lecerf
		17:00	17:15	High Pressure Reactive Milling of Nd2Fe14B-based alloys (virtual)	Imants Dirba
		17:15	17:30	Magnetic patterning by plasma oxidation of Co/Ni bilayers	Piotr Kuświk
		17:30	17:45	Effect of buffer and capping layers of Co/Ni-based thin film heterostructures: Towards sustainable flexible spintronics (virtual)	Mariam Hassan

Session	Chaired by	Start	End	Title Speaker
Posters	Talieh Ghiasi	18:15	19:15	Thursday.P1 (virtual) 26. *Konrad Puzniak* / Study of the spin-1/2 antiferromagnetic XXZ chain SrCo2V2O8 in a transverse external magnetic field 27. *Shruti Chakravarty* / Disorder driven cluster glass state in a geometrically frustrated hexagonal perovskite 28. *Arturo Rodríguez Sota* / Magnetism and growth of a Mn monolayer on Ir (111) investigated by SP STM 29. *Maria Stamenova* / Resistance of atomically sharp domain walls in CuMnAs from first principles 30. *Hatem Ben MAHMOUD* / Magneto-mechanical properties of thin films on stretchable substrate measured by in situ MOKE 31. *Matilde Saura-Múzquiz* / Phase transition, hidden order and magnetic structure of complex scheelites 32. *Danny Thonig* / Spin-mixed states in non-collinear magnets 33. *Katarzyna Gas* / In Situ Compensation Methods for Precise Integral Magnetometry of Miniscule Powder Specimens and Thin Layers (2D) on Bulky Substrates

OLD LIBRARY / ZOOM 2 | Thursday, 28 July 2022

Session	Chaired by	Start	End	Title	Speaker
Semi-plenary	Andrii Chumak	09:15	09:55	Absolute spin-valve effect in magnetic superconducting switches with spin-orbit coupling	Jason Robinson (virtual)

Session	Chaired by	Start	End	Title	Speaker
S14.5	Vinayak Bhat	**10:15**	**10:45**	**Out-of-plane nanomagnonics for exchange spin waves**	**Qi Wang (invited)**
		10:45	11:00	Field orientation dependent magnetization dynamics in sub 100 nm wide magnetic wires	Mahathi Kuchibhotla
		11:00	11:15	Steering spin waves in corrugated waveguides	Jan Klíma
		11:15	11:30	Spin Hall driven spin-wave sources for magnonic conduits	David Alexander Breitbach
		11:30	11:45	Excitation of leaky modes by obliquely incident spin wave beam onto magnonic Gires-Tournois interferometer and its impact on Goos-Hänchen effect for reflected beams	Paweł Gruszecki
		11:45	12:00	Effect of the Dzyaloshinskii-Moriya interaction on the band diagram of one-dimensional magnonic crystals (virtual)	Silvia Tacchi
		12:00	12:15	Non-reciprocal magnonic directional coupler	Andrii Chumak

Session	Chaired by	Start	End	Title	Speaker
S14.6	Jarosław W. Kłos	**13:15**	**13:45**	**Higgs and Goldstone spin-wave modes in striped magnetic texture**	**Matthieu Bailleul (invited)**
		13:45	14:00	A new look at spin-wave modes in a ferromagnetic nanorod	Maciej Krawczyk
		14:00	14:15	Dielectric nanoparticle enhanced Brillouin light scattering spectroscopy of spin waves	Ondřej Wojewoda
		14:15	14:30	Experimental Observation of Spin-Wave Diffraction Phenomena	Christian Riedel
		14:30	14:45	Exceptional points controlling oscillation death in coupled spintronic nano-oscillators (virtual)	Steffen Wittrock
		14:45	15:00	Dynamic interactions between edge and bulk modes in an antidot lattice with perpendicular magnetic anisotropy	Mathieu Moalic

Session	Chaired by	Start	End	Title	Speaker
S14.7	Maciej Krawczyk	**15:45**	**16:15**	**Three-dimensional nanoscale imaging of propagating spin waves via Time-Resolved X-ray Laminography**	**Edoardo Albisetti (invited)**
		16:15	16:30	Nonlinear magnon-phonon processes in coherently driven microstructures	Philipp Pirro
		16:30	16:45	Modelling of magnetoelectric transducers for spin-wave generation	Daniele Narducci
		16:45	17:00	Influencing spin waves with bistable nanomagnet patterns	Matthias Golibrzuch
		17:00	17:15	Lateral spin pumping in an assembly of embedded Fe60Al40 nanostructures	Tanja Strusch
		17:15	17:30	Presence of a sizable out-of-plane interaction in a stripe discommensurated 214-nickelate Pr3/2Sr1/2NiO4(ε = 0.4) (virtual)	Avishek Maity
		17:30	17:45	Tuning interactions in reconfigurable kagome artificial spin ices for magnonics	Vinayak Shantaram Bhat

Session	Chaired by	Start	End	Title Speaker
Posters	Oleksandr Chumak	18:15	19:15	Thursday.P2 (virtual) 24. *Rafael Morales* / Isotropic exchange bias in patterned IrMn/CoFe bilayers 25. *Okan Ozdemir* / Magnetic Characterization of Co2MnAl/ PMN-PT (011) Multiferroic Heterostructures 26. *Parul Rani* / Magnetic properties of amorphous CoxZr100-x films 27. *Tibor Adrian Óvári* / Nonlinear Domain Wall Dynamics in Highly Magnetostrictive Amorphous Nanowires Prepared by Rapid Solidification 28. *Pedro A. Sánchez* / The impact of finite magnetic anisotropy and hydrodynamics on the response of systems of magnetic colloidal particles 29. *Carlos Henrique Santos Verbeno* / Magnetic properties of cobalt ultrathin film structures controlled by buffer-layer roughness 30. *Michael Zawodzki* / Demonstrating and tailoring exchange bias on novel bulk nanocomposites processed by severe plastic deformation 31. *Nerija Zurauskiene* / Tuning of Magnetoresistive Properties of Graphene-Lanthanum Manganite Structures 32. *Zengxin Wei* / A strong competition among the anisotropy terms in magnetically coupled Fe/Al/Fe thin film trilayers

AULA A / ZOOM A | Thursday, 28 July 2022

Session	Chaired by	Start	End	Title	Speaker
S13.6	Claire Donelly	**10:15**	**10:45**	**3D domain wall motion memory with artificial ferromagnet (virtual)**	**Teruo Ono (invited)**
		10:45	11:00	Current induced domain wall motion in Mn4-xNixN benefited from the compensation at room temperature	Taro Komori
		11:00	11:15	Coherent Correlation Imaging: Resolving fluctuating states of matter	Christopher Klose
		11:15	11:30	Domain wall magnetic configuration of soft Py microstructures studied by magnetic X-ray tomography (virtual)	Javier Hermosa
		11:30	11:45	All-Optical Switchable Racetrack based on Compensated Co/Gd quadlayers	Pingzhi Li
		11:45	12:00	Skyrmion racetrack: confinement by the edge	Yanis Sassi
		12:00	12:15	Magnetic imaging of domain walls in CoNiB nanotubes for 3D spintronics	Mahdi Jaber

Session	Chaired by	Start	End	Title	Speaker
S3.3	Robb Puttock	**13:15**	**13:45**	**Thermally-induced magnetic order from glassiness in elemental neodymium**	**Benjamin Verlhac (invited)**
		13:45	14:00	π-orbital order coupled to the spin-1/2 pyrochlore lattice in alkali-sesquioxides	Denis Arčon
		14:00	14:15	Randomness-driven Spin Liquid in a Frustrated Antiferromagnet	Matjaž Gomilšek
		14:15	14:30	Multi-ring patterns in the single pulse all-optical toggle switching and partial demagnetization of amorphous DyCox and TbCox	Zexiang Hu
		14:30	14:45	Fractional Excitation-induced Phonon Renormalization in α-RuCl3	AdrianMerritt
		14:45	15:00	Putative spin-nematic phase in BaCdVO(PO4)2 (virtual)	Markos Skoulatos

Session	Chaired by	Start	End	Title	Speaker
S18.1	Diana Leitao	**15:45**	**16:15**	**Imaging topological defects in a non-collinear antiferromagnet (virtual)**	**Aurore Finco (invited)**
		16:15	**16:45**	**Driving and probing magnetic resonance of single atoms on a surface in a scanning tunneling microscope**	**Tom S. Seifert (invited)**
		16:45	17:00	Millikelvin propagating spin-wave spectroscopy for quantum magnonics	Andrii Chumak
		17:00	17:15	Unravelling the phonon-induced relaxation dynamics of the [VO(TPP)] molecular qudit with inelastic X-ray scattering (virtual)	Elena Garlatti
		17:15	17:30	Quantum Spintronics Energy Harvester	Mathieu Lamblin
		17:30	17:45	Pure dephasing of magnonic quantum states	Huaiyang Yuan

Session	Chaired by	Start	End	Title Speaker
Posters	Witold Skowroński	18:15	19:15	Thursday.P3 (virtual) 26. *Kilian Schäfer* / Improving control of 3D printed shape programmable magneto active artificial muscles by analysis of their magnetization profile 27. *Michal Stekiel* / Magnetoelastic excitations in CeAuAl3, measurements and calculations 28. *Nga Do Thi* / Magnetoransport Properties of Graphene with Magnetic Defects 29. *Vireshwar Mishra* / On the Room Temperature Weak Localization and Anomalous Temperature Dependence of Phase Coherence Length in L21 Ordered Heusler Alloy CoFeMnSi Thin Films 30. *Richa Mudgal* / Determination of Spin-Orbit Torque in PtSe2/NiFe Heterostructure 31. *Roselle Ngaloy* / Van der Waals Magnet based Spin-Valve Devices at Room Temperature 32. *Sam Parker* / A magneto-transport method for measuring the exchange coupling in a synthetic antiferromagnet 33. *Yuliia Kharlan* / Study of the coupling between propagating spin waves in magnetic film

AULA B / ZOOM B | Thursday, 28 July 2022

Session	Chaired by	Start	End	Title	Speaker
S9.3	Dariusz Sztenkiel	**10:15**	**10:45**	**Forecasting the outcome of spintronic experiments with Neural Ordinary Differential Equations (virtual)**	**Damien Querlioz (invited)**
		10:45	11:00	Evidence of electron-phonon spin flips as the intrinsic mechanism for ultrafast demagnetization in 3d transition metals	Theodor Griepe
		11:00	11:15	Interpretation ambiguity in FORC diagrams	Leoni Breth
		11:15	11:30	Temperature dependence of the stochastic thermal magnetic field of magnetic nanoparticles	Katrijn Everaert
		11:30	11:45	Gauged Micromagnetic Model of the Dzyaloshinskii-Moriya Interaction Induced by Symmetry Breaking at the Co/Pt Interface	Adriano Di Pietro
		11:45	12:00	Micromagnetic study of response of superferromagnetic and superparamagnetic nanocomposites to high-frequency field	Andrzej Janutka
		12:00	12:15	Mutual and symmetry-breaking magnetostatic interactions in hybrid structure with Néel-type skyrmion	Mateusz Zelent

Session	Chaired by	Start	End	Title	Speaker
S15.4	Akash Kumar	**13:15**	**13:45**	**Two-Dimensional Materials for Spin-Orbitronics**	**Marcos Guimarães (invited)**
		13:45	14:00	Spin-charge interconversion in 2D transition metal diselenides	Khasan bdukayumov
		14:00	14:15	Autonomous parametric instability driven spintronic auto-oscillator for multi-mode generation	Abbass Hamadeh
		14:15	**14:45**	**Spin-Charge Interconversion with KTaO3 two-dimensional electron gas**	**Srijani Mallik (invited)**
		14:45	15:00	Influence of intermixing on spin-to-charge conversion in sputtered BiSe (virtual)	Wonyoung Choi
		15:00	15:15	Spin-to-charge conversion in highly resistive and sputtered BixSe1-x from all-electrical nanostructured devices	Isabel Arango

Session	Chaired by	Start	End	Title	Speaker
S15.5	Simon Granville	**15:45**	**16:15**	**Electric field modulation of spin transport in semiconductors (virtual)**	**Carlo Zucchetti (invited)**
		16:15	16:30	Magneto-ionic Reversibility in Annealed W/CoFeB/HfO2 (virtual)	Rohit Pachat
		16:30	16:45	Gate-tuneable and chirality-dependent charge-to-spin conversion in Tellurium nanowires	Manuel Suárez-Rodríguez
		16:45	17:00	Spin textures go ferroelectric: perspectives and applications in ferroelectric Rashba semiconductors	Luca Nessi
		17:00	17:15	Voltage-induced Stoner instabilities and spin-polarized currents at the MgO/Fe interface resonant states	Piotr Graczyk

Session	Chaired by	Start	End	Title Speaker
Posters	Celia Sousa	18:15	19:15	Thursday.P4 (virtual) 25. *Bibekananda Paikaray* / Reconfigurable logic operations via gate controlled skyrmion motion in a nanomagnetic device 26. *Amir Nasser Zarezad* / Topological Hall effect in two-dimensional systems with Skyrmion textures in the presence of eletromagnetic impurities. 27. *Michał Inglot* / Edge states at a Rashba spin-orbit domain wall in the magnetized graphene 28. *Wayne Lack* / Thermodynamic properties and switching dynamics of perpendicular shape anisotropy MRAM 29. *Thanh Binh Nguyen* / Higher-order Magnetic Anisotropy in Soft-hard Nanocomposite Materials 30. *Peter Leitner* / Numerically stable and highly performant implementations of the analytic magnetic field solution of the diametrally magnetized cylinder 31. *Miroslav Hennel* / Direct magnetocaloric measurements of Heusler Ni2MnGa microwires 32. *Petro Danylchenko* / Experimental Study of Large Rotational Magnetocaloric Effect in Ni(en)(H2O)4·2H2O

AULA C / ZOOM C | Thursday, 28 July 2022

Session	Chaired by	Start	End	Title	Speaker
S7.2	Fernando Bartolome	**10:15**	**10:45**	**Lanthanide single-molecule magnets functionalized by cyanido transition metal complexes**	**Szymon Chorazy (invited)**
		10:45	11:00	Magnetism of vanadium and tungsten based polyoxometalates functionalized with phtalocyaniato lanthanide (Y,Yb,Dy) moieties	Piotr Kozłowski
		11:00	11:15	Slow spin dynamics in GdIII-based propeller-like qubit candidate and its structural analogues with other lanthanide ions	Gabriela Handzlik
		11:15	11:30	Construction of thin film systems using solvatomagnetic coordination polymers	Magdalena Fitta
		11:30	11:45	Dynamical screening at the metal-molecule interfaces: a hindrance to molecular spintronic device development?	Sumanta Bhandary
		11:45	**12:15**	**Data-powered insights into single-ion magnetism: the hidden role of vibronic coupling in the effective barrier (virtual)**	**Alejandro Gaita-Ariño (invited)**

Session	Chaired by	Start	End	Title	Speaker
S8.4	Jaroslav Mudryk	**13:15**	**13:45**	Designing Competitive High Entropy Alloys for Magnetocalorics	**Jia Yan Law (invited)**
		13:45	14:00	Effect of Particle Size in Extruding Flexible Permanent Magnet Filaments from Tuned Composites for Additive Manufacturing	Ester M. Palmero
		14:00	14:15	Additive manufacturing of magnetocaloric 3D structures: A cost-effective way for printing cellulose-based metallic structures	Bosco Rodriguez-Crespo
		14:15	14:30	Investigation of the influence of printing parameters and post- processing conditions on the magnetic properties of an additive manufactured Fe-Cr-Co alloy	Siegfried Arneitz
		14:30	14:45	Magnetic properties of high induction metallic ribbons Fe67Co20B13 prepared by continuous ultra-rapid annealing method.	Przemyslaw Zackiewicz
		14:45	15:00	Sustainability through industrial recycling and advanced manufacturing of nanocrystalline ferrite permanent magnet material	Alberto Bollero
		15:00	15:15	The FeCoNiPdCu high-entropy alloy: Excellent magnetic softness arising from a nanocomposite structure	Primož Koželj

Session	Chaired by	Start	End	Title	Speaker
S8.5	João H. Belo	15:45	16:15	**Designing rare earth materials for basic science and magnetic refrigeration**	**Yaroslav Mudryk (invited)**
		16:15	16:30	Magnetoelastic tuning with site-specific substitution in giant magnetocaloric Fe2P- type system	Sagar horai
		16:30	16:45	Arrested martensitic transformations in multicaloric all-d-metal Ni-Co-Mn-Ti Heusler alloys (virtual)	Benedikt Beckmann
		16:45	17:00	Impact of F and S doping on (Mn,Fe)2(P,Si) giant magnetocaloric materials (virtual)	Fengqi Zhang
		17:00	17:15	Influence of Martensitic Configuration on Hysteretic Properties of Heusler Films Studied by Advanced Imaging in Temperature and Magnetic Field (virtual)	Milad Takhsha
		17:15	17:30	Modifying magnetic interactions and hysteresis by introducing Mn in La(Fe,Si)13	Benedikt Eggert
		17:30	17:45	Tuning the magnetic properties of magnetocaloric La(Fe,Si)13 using rare earth doping	Benedikt Eggert

AULA D / ZOOM D | Thursday, 28 July 2022

Session	Chaired by	Start	End	Title	Speaker
S4.4	Dominik Krienger	**10:15**	**10:45**	**Antiferromagnetic dynamics: dissipative and non-dissipative baths**	**Tim Ludwig (invited)**
		10:45	11:00	Compensation point in the ferrimagnetic nanoparticles	Paweł Sobieszczyk
		11:00	11:15	An ab initio parameterised spin model of hematite	Tobias Dannegger
		11:15	11:30	Suppressing electrical switching of antiferromagnets with high magnetic fields	Casper Schippers
		11:30	11:45	Antiferromagnetic Hysteresis above the Spin Flop Field	Michał Grzybowski
		11:45	12:00	Hysteretic effects and magnetotransport of electrically switched CuMnAs	Jan Zubáč
		12:00	12:15	Molecular beam epitaxy of the half-Heusler antiferromagnet CuMnSb	Johannes Kleinlein

Session	Chaired by	Start	End	Title	Speaker
S4.5	Kamil Olejnik	**13:15**	**13:45**	**Complex ground state, spin waves and field induced transitions of the noncollinear antiferromagnet Mn5Si3 (virtual)**	**Nikolaos Biniskos (invited)**
		13:45	14:00	Anisotropic spontaneous Hall effect in unconventional antiferromagnet Mn5Si3	Miina Leiviskä
		14:00	14:15	Enhanced anomalous Hall effect in Cr modulation-doped Mn3Sn thin films (virtual)	Xin Chen
		14:15	14:30	Anomalous Nernst effect of the spin-split antiferromagnet Mn5Si3	Antonin Badura
		14:30	14:45	Bulk Hexagonal MnTe - a Room Temperature Antiferromagnet	Kacper Kluczyk
		14:45	15:00	Spontaneous anomalous Hall effect arising from antiparallel magnetic order in a semiconductor	Dominik Kriegner
		15:00	15:15	Altermagnetism and magnetic groups with pseudoscalar electron spin	Ilja Turek

Session	Chaired by	Start	End	Title	Speaker
S10.2		**15:45**	**16:15**	**Application of High Sensitive AC Field Modulation GMR Sensor to Magnetic Field Microscope (virtual)**	**Akira Kikitsu (invited)**
		16:15	**16:45**	**Revealing 3D magnetic textures in [Pt/Co/Cu]x15 multilayers by coherent X-ray imaging with 5 nm resolution**	**Riccardo Battistelli (invited)**
		16:45	17:00	A fast method to recover 3D magnetization of 2D structures and multilayers (virtual)	Alicia Estela Herguedas-Alonso
		17:00	17:15	High Frequency Sample Excitation at the ALBA-PEEM	Muhammad Waqas Khaliq
		17:15	17:30	Local magnetic probe microscope integrating magnetoresistive sensors (virtual)	Kevin Dalla Francesca
		17:30	17:45	Magneto-optical detection of spin-orbit torque vector via first order Kerr effects (virtual)	Claudio Gonzalez-Fuentes

MICKIEWICZ AUDITORIUM / ZOOM 1 | Friday, 29 July 2022

Session	Chaired by	Start	End	Title	Speaker
Plenary	Simon Granville	08:15	09:05	Domain Walls and Skyrmions: From Ferromagnets to Ferrimagnets (virtual)	Geoffrey Beach
Semi-Plenary	Diana Leitao	09:15	09:55	Magnetic field detection with spintronics: state of the art and innovations	Myriam Pannetier Lecoeur

Session	Chaired by	Start	End	Title	Speaker
S15.6	Srijani Mallik	**10:15**	**10:45**	**Robust mutual synchronization of large spin hall nano-oscillator chains**	**Akash Kumar (invited)**
		10:45	11:00	Bath-induced spin inertia	Tim Ludwig
		11:00	11:15	Qualitatively different injection locking behavior of distinctly different spin Hall nano-oscillator modes	Mona Rajabali
		11:15	11:30	Study of Spin-Orbit Interactions and Multilevel Switching in Co/Pt/Co trilayer	Krzysztof Grochot
		11:30	11:45	Spin orbit torque magnetization dynamics and switching in heavy metal/ferromagnet multilayers with mixed anisotropies	Stanisław Łazarski
		11:45	12:00	Tailoring the switching efficiency of magnetic tunnel junctions by the fieldlike spin-orbit torque	Viola Krizakova
		12:00	12:15	Chiral coupling between magnetic layers with orthogonal magnetization (virtual)	Can Onur Avci

Session	Chaired by	Start	End	Title	Speaker
S11.10	Marta Borysiewicz	**13:15**	**13:45**	**Anatomy of magnetic anisotropy and Gilbert damping in layered systems**	**Marek Cinal (invited)**
		13:45	14:00	Element specific magnetocrystalline anisotropy of Sm-Co thin films	Georgia Gkouzia
		14:00	14:15	Magnetic anisotropy and exchange bias in V2O3/Ni epitaxial layers	Kristina Ignatova
		14:15	14:30	Influence of heavy sputtering gas on perpendicular magnetic anisotropy and interlayer exchange coupling in Pt/Co/Ir synthetic antiferromagnets (virtual)	Daniel Gopman
		14:30	14:45	Quantitative description of magnetic anisotropy in insulating GaN:Mn	Katarzyna Gas
		14:45	15:00	Spin orbital reorientation transitions induced by magnetic field	Dariusz Sztenkiel

Session	Chaired by	Start	End	Title / Speaker
Special session		15:45	16:45	Closing session

OLD LIBRARY / ZOOM 2 | Friday, 29 July 2022

Session	Chaired by	Start	End	Title	Speaker
Semi-plenary	Maciej Krawczyk	09:15	09:55	Ultrafast nonthermal all-optical switching of magnetization in dielectrics	Andrzej Stupakiewicz

Session	Chaired by	Start	End	Title	Speaker
S14.8	Ilya Razdolski	**10:15**	**10:45**	**Polarized phonons carry the missing angular momentum in femtosecond demagnetization**	**Hannah Lange (invited)**
		10:45	11:00	Coulomb Scattering Contribution to Ultrafast Spin Dynamics in a Ferromagnetic Model System: Precession and Relaxation Dynamics (virtual)	Kai Leckron
		11:00	11:15	Accelerating double pulse all-optical write/erase cycles in metallic ferrimagnets	Felix Steinbach
		11:15	11:30	Modeling ultrafast demagnetization and spin transport: the interplay of spin-polarized electrons and thermal magnons	Maarten Beens
		11:30	11:45	Heat-conserving three-temperature model for ultrafast magnetisation dynamics simulations (virtual)	Maryna Pankratova
		11:45	12:00	Role of electronic excitation, relaxation and transport processes for X-ray induced ultrafast demagnetization within magnetic multilayer systems	Konrad Kapcia
		12:00	12:15	Electron-Magnon Scattering Dynamics in a 2-Band Stoner Model (virtual)	Félix Dusabirane

Session	Chaired by	Start	End	Title	Speaker
S14.9	Qi Wang	**13:15**	**13:45**	**The topological interface modes in planar one-dimensional magnonic crystals**	**Jarosław Kłos (invited)**
		13:45	14:00	Goos-Hänchen effect at Brillouin light scattering by a magnetostatic wave in the Damon-Eshbach configuration (virtual)	Igor Lyubchanskii
		14:00	14:15	Observation of Femtosecond Laser Comb Driven Magnetoelastic Modes	Avinash Kumar Chaurasiya
		14:15	14:30	Magnetoelastic interactions between surface acoustic waves and spin waves in nanopatterned structure	Grzegorz Centała
		14:30	14:45	Optical detection of magnon-phonon coupling using μFR-MOKE technique (virtual)	Manuel Müller
		14:45	15:00	Optical Control of Spin Waves in YIG/Plasmonic Heterostructures	Nikolai Kuznetsov
		15:00	15:15	Magnonic and phononic modes in Ni80Fe20 array of antidots	Stéphane Chiroli

AULA A / ZOOM A | Friday, 29 July 2022

Session	Chaired by	Start	End	Title	Speaker
S2.1	Denys Makarov	**10:15**	**10:45**	**Evidence of Robust Half-Metallicity in Strained Manganite Films**	**Giovanni Vinai (invited)**
		10:45	11:00	Effect of superconductivity on magnetic exchange interactions	Uriel A. Aceves Rodriguez
		11:00	11:15	Dynamical effects of correlated superconducting nanostructures	Tadeusz Domański
		11:15	11:30	Interplay of excitonic correlations, quantum spin Hall effect and superconductivity in electron-hole bilayers	Tania Paul
		11:30	11:45	Point Contact Spectroscopy of Interfacial Superconductivity of PbTe/SnTe Layered System with Dislocation Grid	Paweł Sidorczak
		11:45	12:00	Spin-dependent thermoelectric response of multi-terminal hybrid quantum dot-based device (virtual)	Vrishali Sonar
		12:00	12:15	Coulomb blockade in compressed La1.952Sr0.048CuO4 thin films	Irina Zajcewa

Session	Chaired by	Start	End	Title	Speaker
S13.7	Johannes Kleinlein	**13:15**	**13:45**	**A potential platform for Antiferromagnetic Skyrmionics (virtual)**	**Hariom Jani (invited)**
		13:45	14:00	Diffusive motion of antiferromagnetically coupled skyrmions (virtual)	Takaaki Dohi
		14:00	14:15	3D topological charge of the Bloch point in a spherical magnetic nanoparticle	Konstantin Gusliyenko
		14:15	14:30	Screw dislocations in chiral magnets	Maria Azhar
		14:30	14:45	Brownian reservoir computing realized using geometrically confined skyrmions	Klaus Raab
		14:45	15:00	Bloch hopfion spin-wave spectra in ferromagnetic medium	Krzysztof Sobucki
		15:00	15:15	Nano-scale collinear multi-Q states driven by higher-order interactions (virtual)	Mara Gutzeit

AULA B / ZOOM B | Friday, 29 July 2022

Session	Chaired by	Start	End	Title	Speaker
S16.2	Oliver Rader	**10:15**	**10:45**	**Quantum oscillation studies of magnetic kagome metals**	**Linda Yen (invited)**
		10:45	11:00	Surface decorated Weyl semimetal: topological quantum Lifshitz transition	Ashutosh Wadge
		11:00	11:15	Axion insulating phase in superlattices without inversion symmetry	Rajibul Islam
		11:15	11:30	Berry phase effects in the layered topological metals (virtual)	Wojciech Brzezicki
		11:30	11:45	Hard magnet topological semimetals in XPt3 compounds with the harmony of Berry curvature	Jacob Gayles
		11:45	**12:15**	**Giant valley Zeeman coupling in the NbS2 surface layer of V1/3NbS2**	**Phil King (invited)**

AULA C / ZOOM C | Friday, 29 July 2022

Session	Chaired by	Start	End	Title	Speaker
S17.2	Piotr Kuświk	**10:15**	**10:45**	**(Super)conducting filaments in reduced SrTiO3: local polarization and electronic properties**	**Gustav Bihlmayer**
		10:45	11:00	Multiferroicity and Magnetization Dynamics in Fe/BTO/LSMO Tunnel Junction	Witold Skowronski
		11:00	11:15	Magnetic phase transitions in multiferroic perovskite solid solutions based on BiFeO3	Erik Cizmar
		11:15	11:30	Light-induced Magnetic Modifications in Ni/PMN-PT Multiferroic Heterostructure	Deepak Dagur
		11:30	11:45	Contribution of charge and strain coupling in artificial multiferroic Fe3O4/PMN-PT heterostructures (virtual)	Patrick Schöffmann
		11:45	12:00	Search For the Single-ion Displacive-type Perovskite Multiferroics	Bogdan Dabrowski
		12:00	12:15	Electronic, charge and topological reconstructions at the oxide interfaces (virtual)	Carmine Autieri

Session	Chaired by	Start	End	Title	Speaker
S17.3	K. Roleder and A. Bußmann-Holder	**13:15**	**13:45**	**Energy Landscape of Nanodisks with Dzyaloshinskii-Moriya Interaction and Perpendicular Magnetic Anisotropy**	**Gabriel Chaves-O'Flynn (invited)**
		13:45	**14:15**	**Quasi-bidimensional lattices of magnetic and electric dipolar moments in EuAl12O19**	**Gael Bastien (invited)**
		14:15	14:30	Mastering negative thermal expansion via tunable induced strain in La(Fe,Si)13-based compounds	João H. Belo
		14:30	14:45	Material and microstructure design for a multicaloric cooling cycle which exploits thermal hysteresis	Lukas Pfeuffer
		14:45	15:00	Impact of pressure on magnetic properties of compensated GdCrO3 ferrimagnet (virtual)	Andrzej Wiśniewski
		15:00	15:15	Evolution of structural and magnetic properties in electron-doped Ruddlesden Popper based bilayer manganite Ca2-xNdxMn2O7	Neenu Prasannan